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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,127

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Hyun Sook Kim

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STAAS & HALSEY LLP

SUITE 700

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EXAMINER

WALDBAUM, SAMUEL A

ART UNIT

PAPER NUMBER

1762

MAIL DATE

DELIVERY MODE

09/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/813,127

Applicant(s)

KIM ET AL.

Examiner

Samuel A. Waldbaum

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,12 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) 8-11 and 22-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 12-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In the amendment filed on September 4, 2007, applicant has amended claims 1, 3-5, 7, 12, 15 and 20-21 and cancelled claims 2 and 13-14. The old rejection is withdrawn and new rejection is found below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5, 6 and 17-18 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. In light of the amendment claims 5, 6, 17 and 18 are indefinite. The independent claims now require that the dissolution pipe is **directly** between the pump and the tub, where the second end extends beyond the tub. These dependent claim further claim that the second end is provided at the inlet of the tub, which is not possible in order for the pipe to be directly between the tub and the pump, hence it is indefinite. This claims will be interpreted, in light of the specification that the second end was meant to say first end.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Euler et al (U.S. 5,191,669, hereafter '669).

6. Claim 1: '669 teaches a drum washing machine, comprising:

a water tub including a lower portion (part 34, col. 3, lines 5 – 15);

a rotary tub rotatably provided in the water tub (part 35, col. 3, lines 5 – 15); and

a detergent dissolving unit to dissolve a detergent, initially contained in the lower portion of the water tub in water initially contained in the water tub, outside of the water tub and provided with a first end, which is connected to an inside of the water tub (fig. 3, part 80, col. 3 lines 30 – 45).

'669 teaches that the detergent dissolving unit comprises:

a detergent dissolution pipe having a first end connected with the inside of the water tub and a second end extended outside of the water tub (fig. 3, parts 82, 84 and the piping that extends from the nozzle, part 51, to the piping part 84); and

a pump to pump the water and the detergent contained in the lower portion of the water tub to the detergent dissolution pipe (fig. 3, part 38, col. 3, lines 30 – 45) wherein the detergent dissolution pipe is between the tub and the pump (fig. 3, the first end, part 51, is connected with the inside of the tub and parts 84 and 82 is between the pump and the tub).

7. Claims 3: '669 teaches that the detergent dissolving unit comprises a control unit to operate the pump according to preset ON/OFF periods to reciprocate the water

and the detergent contained in the lower portion of the water tub between the water tub and the detergent dissolution pipe (col. 5, lines 15 – 30).

8. Claims 4: '669 teaches that the detergent dissolving unit further comprises a detergent dissolution space having a diameter greater than that of the detergent dissolution pipe formed at the detergent dissolution pipe (fig. 3, the detergent dissolution pipe has a branch off from the main pipe by valve 170, into the dissolution space, part 80, which has two pipes going into to therefore it has to have a greater diameter than one pipe by itself).

9. Claims 5: '669 teaches that the first end of the detergent dissolution pipe is provided at an inlet of the rotary tub (fig 3, part 84, col. 5, lines 15 – 65).

10. Claims 6: '669 teaches that the detergent dissolving unit further comprises a spray nozzle provided at the first end of the detergent dissolution pipe (fig. 3, part 51).

11. Claims 7: '669 teaches that the detergent dissolving unit further comprises a valve mounted at the detergent dissolution pipe to selectively open and close a flow passage (fig. 3, part 128, col. 6, lines 19 – 34).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 12 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Euler et al (U.S. 5,191,669, hereafter `669) in further in view of Pellerin (U.S. RE36,688, hereafter `688).

14. Claims 12, 20 and 21: `669 teaches a drum washing machine, comprising:

a cylindrical rotary tub (part 35, col. 3, lines 5 – 15); rotatably provided in the water tub and opened at a first end corresponding with the first end of the cylindrical water tub (fig. 3 where the front opens for the insertion of the laundry); and

a detergent dissolving unit provided outside of the water tub, to partially dissolve or increase solubility or to dissolve the detergent in the water outside of the water tub (col. 5, lines, 15 – 65, by recirculating the concentration, more detergent is dissolve through agitation or through the use of a heater, part 400), and having a first end connected to an inside of the water tub (fig. 3, part 80, col. 3 lines 30 – 45).

a detergent dissolution pipe having a first end connected with the inside of the water tub and a second end extended outside of the water tub (fig. 3, parts 82, 84 and the piping that extends from the nozzle, part 51, to the piping part 84); and

a pump to pump the water and the detergent contained in the lower portion of the water tub to the detergent dissolution pipe (fig. 3, part 38, col. 3, lines 30 – 45) wherein the detergent dissolution pipe is between the tub and the pump (fig. 3, the first end, part 51, is connected with the inside of the tub and parts 84 and 82 is between the pump and the tub).

'669 does not teach that the outside tub is cylindrical. '688 is a horizontal washing machine with a tub and a spin tub. '688 teaches the use of a cylindrical outer tub (fig. 1 part 11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a cylindrical outer tub as taught by '688, in the outer tub of '669, since '688 demonstrates cylindrical outer tubs are known and used in washers and a change of shape is generally recognized as being within the ordinary level of skill in the art. *In re Dailey*, 357 F.2nd 669, 149 USPQ 1966.

15. Claim 15: See claim 3 above.

16. Claim 16: See claim 4 above.

17. Claim 17: See claim 5 above.

18. Claim 18: See claim 6 above.

19. Claim 19: See claim 7 above.

Response to Arguments

20. Applicant's arguments filed September 4, 2007 have been fully considered but they are not persuasive.

21. See above rejection as how the dissolution pipe is directly between the pump and the tub.

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22. Claim 3, the citation is shows that the pump is capable of being turned on and off and the pump can be turned off with valves 166, closing off the drain, valve 170 closing off the outlet to the dissolution pipe and valve 128 open the water is capable of being reciprocated back and forth between the tub and parts of the dissolution pipe since the water is just sitting there.

23. Claim 4 the tank has two pipes going in, hence the diameter is big enough to accommodate both pipes, hence the diameter is greater than one pipe (fig. 3, pipes are coming in from the bottom, and the diameter is big enough for both pipes, hence it is greater than one individual pipe).

Conclusion

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel A. Waldbaum whose telephone number is 571-270-1860. The examiner can normally be reached on M-TR 6:20-3:50, F 6:30-10:30 est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/FRANKIE L. STINSON/
Primary Examiner
GROUP ART UNIT 1746